DATE: **21 September 2021**

DESIGNER: **A Elliott**

PROJECT No: **BRT**

PROJECT NAME: **Bluewater Parkway junction**

Bluewater Parkway
Existing Lighting achieves class C2 (Grid 2)

New junction off Bluewater Parkway
Lighitng class C1 (Grid 1).

Lighting Classes taken from BS 5489-1:2013, the lighting levels for which are taken from EN 13201-2:2015.

Minimum required illuminance levels (C2):
Eav = 20.00 Uo = 0.40

Minimum required illuminance levels (C1):
Eav = 30.00 Uo = 0.40

BRT-TG-XX-ZZ-CA-LI-1301-S3_P04

PREPARED BY:

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Layout Report

General Data

Dimensions in Metres Angles in Degrees

Calculation Grids

ID	Grid Name	X	Y	X' Length	Y' Length	X' Spacing	Y' Spacing
1	Grid 1	558418.25	173487.94	39.00	33.00	1.50	1.50
2	Grid 2	558363.35	173436.64	84.00	120.00	1.50	1.50
3	Grid 3	558365.95	173391.04	70.60	67.60	1.47	1.47

Luminaires

Luminaire C Data

Supplier	Philips
Type	BGP704 DN33
Lamp(s)	LED-HB 5.2S 730
Lamp Flux (klm)	15.00
File Name	Luma Gen2 Medium_BGP704_DN33_15000 _80LED_5.2S_CLO_L90_730.ies
Maintenance Factor	0.85
Lum. Int. Class	G6
Lamp S/P Ratio	1.30
No. in Project	2

Luminaire F Data

Supplier	D W Windsor
Type	DWW 64LED 4k A3 CLO 400mA UMSUG 42 0066 0000 100
Lamp(s)	64 x 4K LED
Lamp Flux (klm)	11.52
File Name	DWW 64LED 4k A3 CLO_400mA UMSUG 42 0066 0000 100.ies
Maintenance Factor	0.78
Lum. Int. Class	G3
Lamp S/P Ratio	1.50
No. in Project	30

Layout

ID /Mast	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1/1	F	558411.10	173482.52	10.00	350.00	0.00	0.00	1.50			
2/1	F	558411.10	173482.52	10.00	170.00	0.00	0.00	1.50			
3/2	F	558406.41	173453.98	10.00	351.00	0.00	0.00	1.50			
4/2	F	558406.41	173453.98	10.00	171.00	0.00	0.00	1.50			
5/3	F	558411.95	173507.47	10.00	3.00	0.00	0.00	1.50			
6/3	F	558411.95	173507.47	10.00	183.00	0.00	0.00	1.50			
7	F	558384.46	173450.45	10.00	340.00	0.00	0.00	1.50			
8	F	558384.45	173450.52	10.00	261.00	0.00	0.00	1.50			
9	F	558419.91	173443.52	10.00	279.00	0.00	0.00	1.50			
10	F	558419.87	173443.54	10.00	181.00	0.00	0.00	1.50			
11	F	558381.55	173424.05	10.00	72.00	0.00	0.00	1.50			
12	F	558381.67	173424.01	10.00	0.00	0.00	0.00	1.50			
13	F	558419.23	173419.09	10.00	22.00	0.00	0.00	1.50			
14	F	558419.16	173419.05	10.00	254.00	0.00	0.00	1.50			
15/4	F	558398.85	173411.94	10.00	350.00	0.00	0.00	1.50			
16/4	F	558398.85	173411.94	10.00	170.00	0.00	0.00	1.50			
17	F	558378.59	173538.76	10.00	22.00	0.00	0.00	1.50			
18	F	558378.56	173538.82	10.00	98.00	0.00	0.00	1.50			

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Layout Continued

ID /Mast	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
19/5	F	558402.82	173540.87	10.00	32.00	0.00	0.00	1.50			
20/5	F	558402.82	173540.87	10.00	212.00	0.00	0.00	1.50			
21	F	558362.47	173557.60	10.00	48.00	0.00	0.00	1.50			
22	F	558362.55	173557.65	10.00	342.00	0.00	0.00	1.50			
23	F	558420.01	173563.48	10.00	124.00	0.00	0.00	1.50			
24	F	558420.04	173563.39	10.00	205.00	0.00	0.00	1.50			
25/6	F	558407.52	173579.95	10.00	314.00	0.00	0.00	1.50			
26/6	F	558407.52	173579.95	10.00	134.00	0.00	0.00	1.50			
27/7	F	558374.30	173584.49	10.00	35.00	0.00	0.00	1.50			
28/7	F	558374.30	173584.49	10.00	215.00	0.00	0.00	1.50			
29	F	558389.23	173595.63	10.00	316.00	0.00	0.00	1.00			
30	F	558389.12	173595.64	10.00	234.00	0.00	0.00	1.00			
31	C	558447.93	173508.42	8.00	267.00	0.00	0.00	0.90			
33	C	558435.26	173499.30	8.00	89.00	0.00	0.00	0.90			

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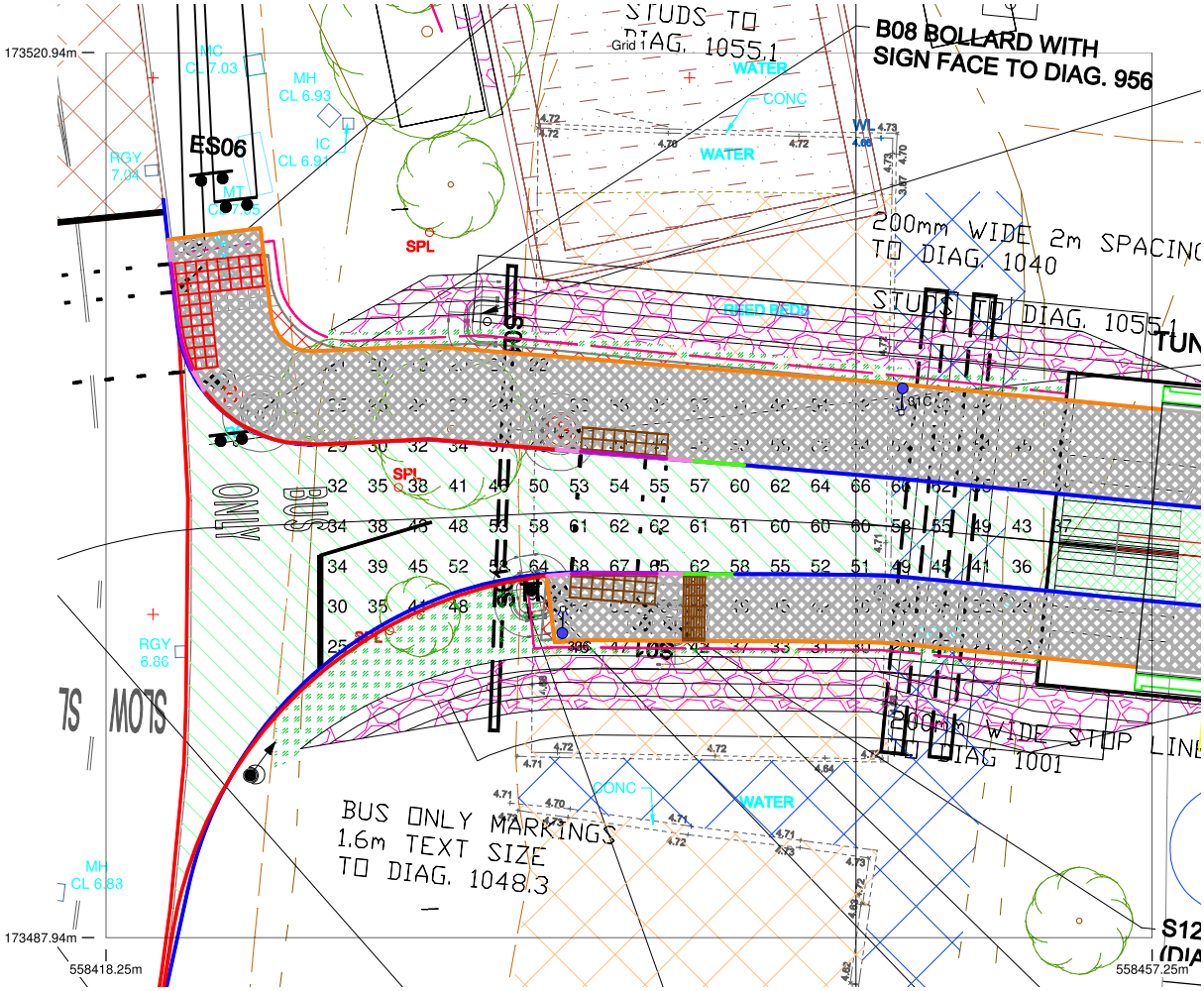
Horizontal Illuminance (lux)

Grid 1



Results

Eav	44.87
Emin	19.47
Emax	67.61
Emin/Emax	0.29
Emin/Eav	0.43

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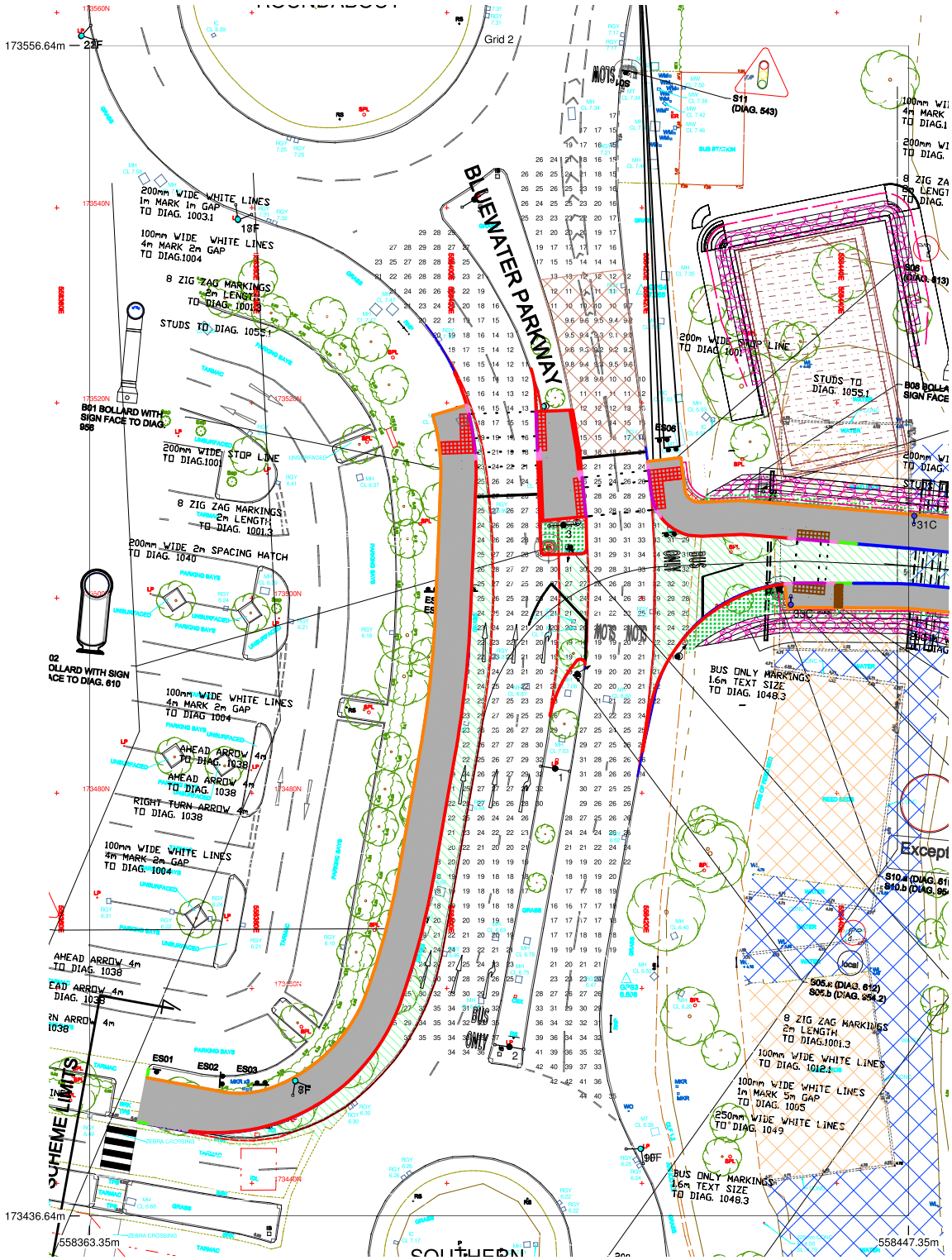
Horizontal Illuminance (lux)

Grid 2


Grid 2
BLUEWATER PARKWAY
200mm WIDE WHITE LINES 1m MARK 1m GAP TO DIAG. 1003.1
100mm WIDE WHITE LINES 4m MARK 2m GAP TO DIAG.1004
8 ZIG ZAG MARKINGS 2m LENGTH TO DIAG. 1001.3
STUDS TO DIAG. 1055.1
B01 BOLLARD WITH SIGN FACE TO DIAG. 958
200mm WIDE STOP LINE TO DIAG.1001
8 ZIG ZAG MARKINGS 2m LENGTH TO DIAG. 1001.3
200mm WIDE 2m SPACING HATCH TO DIAG. 1040
100mm WIDE WHITE LINES 4m MARK 2m GAP TO DIAG 1004
AHEAD ARROW 4m TO DIAG. 1038
AHEAD ARROW 4m TO DIAG. 1038
RIGHT TURN ARROW 4m TO DIAG. 1038
100mm WIDE WHITE LINES 4m MARK 2m GAP TO DIAG. 1004
AHEAD ARROW 4m TO DIAG. 1038
ES01
ES02
ES03
SCHEME LIMITS
S11 (DIAG. 543)
B08 (DIAG. 413)
200mm WIDE STOP LINE TO DIAG. 1001
STUDS TO DIAG. 1055.1
B08 BOLLARD SIGN FACE
BUS ONLY MARKINGS 1.6m TEXT SIZE TO DIAG. 1048.3
8 ZIG ZAG MARKINGS 2m LENGTH TO DIAG.1001.3
100mm WIDE WHITE LINES TO DIAG. 1012.1
100mm WIDE WHITE LINES 1m MARK 5m GAP TO DIAG. 1005
250mm WIDE WHITE LINES TO DIAG. 1049
BUS ONLY MARKINGS 1.6m TEXT SIZE TO DIAG. 1048.3
S10.a (DIAG. 61
S10.b (DIAG. 95
S05.a (DIAG. 812)
S05.b (DIAG. 954.2)
173556.64m
173436.64m
558363.35m
558447.35m

Results

Eav	22.25
Emin	9.02
Emax	44.20
Emin/Emax	0.20

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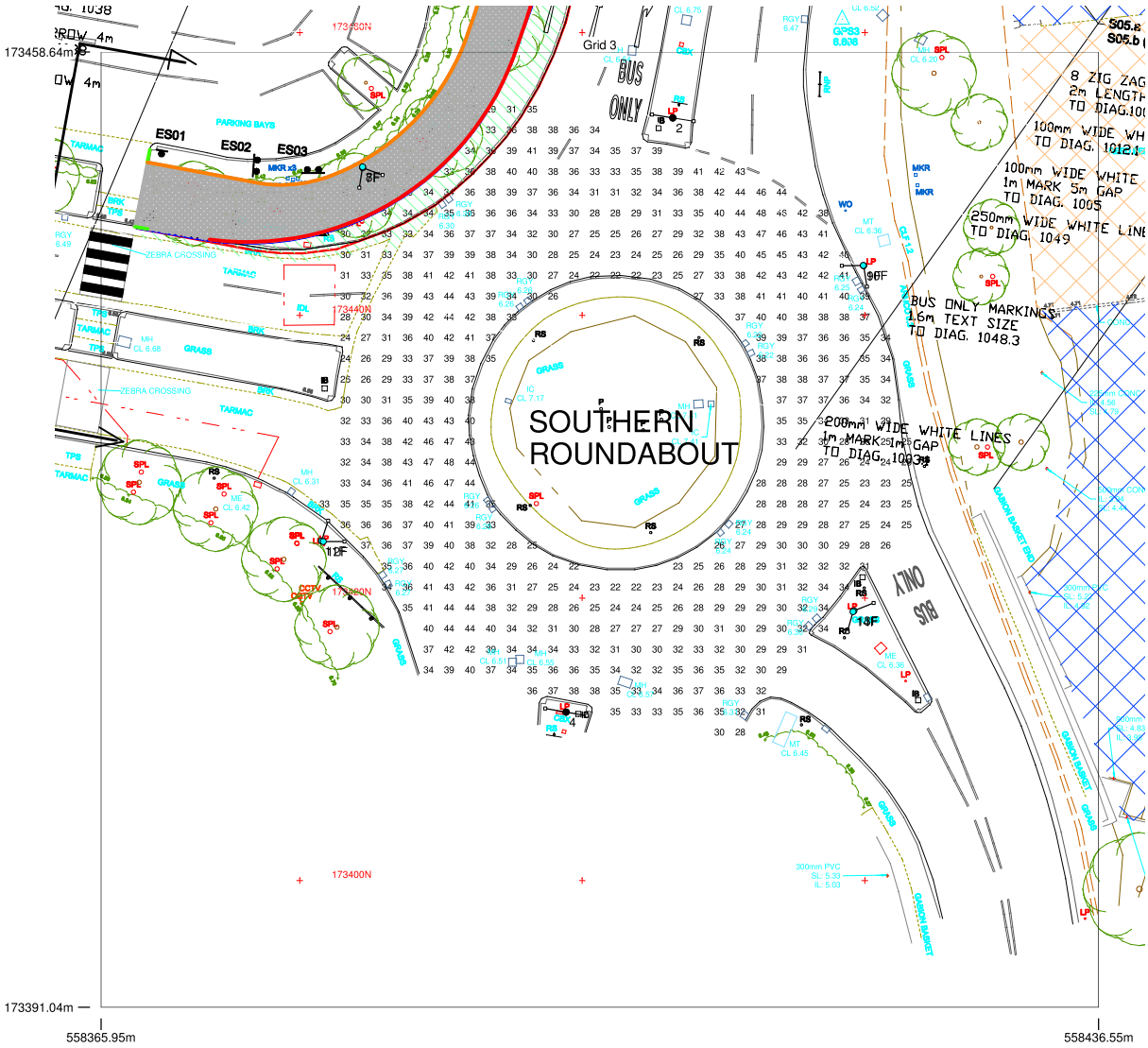
Horizontal Illuminance (lux)

Grid 3



Results

Eav	33.79
Emin	21.51
Emax	47.80
Emin/Emax	0.45
Emin/Eav	0.64

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